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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/833,042	04/12/2001	Hirokazu Takatama	043034/0167	2387

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EXAMINER	
MCCARTHY, CHRISTOPHER S	
ART UNIT	**PAPER NUMBER**
2113	

DATE MAILED: 07/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/833,042	TAKATAMA ET AL.	
	Examiner	Art Unit	
	Christopher S. McCarthy	2113	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *3-21,23-26,28-30 and 32-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *3-21,23-26,28-30 and 32-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 April 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *1-4*
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 30, 32-33 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The preamble needs to recite "A computer readable medium comprising of computer readable instructions..."

Information Disclosure Statement

2. The information disclosure statement filed 5/29/2001 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because both documents refer to a further that may be relevant to the case. A1 makes a reference on page 37 to an appendix that contains routing algorithms; the examiner needs this appendix to fully consider this document. A2 makes reference to another article denoted as [30] on page 658 and this [30] is cited as containing a routing algorithm, which may be relevant to the present application, and is therefore needed by the examiner to fully consider this reference. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the

statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609 ¶ C(1).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 3-21, 23-26, 28-30, 32-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Bertin, European Patent Application EP0814583A2.

As per claim 3, Bertin teaches a load distribution device provided in each of nodes in a network, comprising of a link state memory retrievably storing link state information of the network, wherein the link state memory is used to dynamically calculate an alternate route for failure recovery when a failure notification is received; a route candidate memory retrievably storing a plurality of route candidates for each of possible endpoint nodes; and a route determiner for determining a route for a normally set up connection, wherein a route having a relatively small load is selected from a plurality of route candidates with a relatively high probability, wherein the router determiner comprises: a route quality checker for checking quality of each of the route candidates by referring lo the link state information stored in the link state memory when receiving a connection setup request; and a route candidate selector for selecting the route for a requested connection from the route candidates depending on the quality of each of the

route candidates, wherein the route candidate selector selects a route candidate having a broadest available bandwidth as the route for a requested connection (column 7, lines 15-56; column 6, lines 21-26; column 14, line 51 – column 15, line 39).

As per claim 4, Bertin teaches a load distribution device provided in #ach of nodes in a network, comprising: a link state memory retrievably storing link state information of the network, wherein the link state memory is used to dynamically calculate an alternate route for failure recovery when a failure notification is received; a route candidate memory retrievably storing a plurality of route candidates for each of possible endpoint nodes; and a route determiner for determining a route for a normally set up connection, wherein a route having a relatively small load is selected from a plurality of route candidates with a relatively high probability, wherein the router determiner comprises: a route quality checker for checking quality of each of the route candidates by referring to the link state information stored in the link state memory when receiving a connection setup request; and a route candidate selector for selecting the route for a requested connection from the route candidates depending on the quality of each of the route candidates (column 7, lines 15-56; column 6, lines 21-26; column 14, line 51 – column 15, line 39), wherein the route candidate selector selects a route candidate as the route for a requested connection from the route candidates in a round robin fashion (column 7, lines 5-8, wherein, the path selector tries the path adjacent to the current path until a desirable path is found).

As per claim 5, Bertin teaches a load distribution device provided in each of nodes in a network, comprising: a link slate memory retrievably storing link state information of the network, wherein the link state memory is used lo dynamically calculate an alternate route for

failure recovery when a failure notification is received; a route candidate memory retrievably storing a plurality of route candidates for each of possible endpoint nodes; and a route determiner for determining a route for a normally set up connection, wherein a route having a relatively small load is selected from a plurality of route candidates with a relatively high probability, wherein the router determiner comprises: a route quality checker for checking quality of ea-ch of the route candidates by referring to the link state information stored in the link state memory when receiving a connection setup request; and a route candidate selector for selecting the route for a requested connection from the route candidates depending on the quality of each of the route candidates (column 7, lines 15-56; column 6, lines 21-26; column 14, line 51 – column 15, line 39), wherein the route candidate selector selects a route candidate as the route for a requested connection from the route candidates in a weighted round robin fashion using an available bandwidth of each of the route candidates as a weight (column 7, lines 5-8, wherein, the path selector tries the path adjacent to the current path until a desirable path is found; column 16, line 25 – column 17, line 10).

As per claim 6, Bertin teaches a load distribution device provided in each of nodes in a network, comprising: a link state memory retrievably storing link state information of the network, wherein the link state memory is used to dynamically calculate an alternate route for failure recovery when a failure notification is received; a route candidate memory retrievably storing a plurality of route candidates for each of possible endpoint nodes; and a route determiner for determining a route for a normally set up connection, wherein a route having a relatively small load is selected from a plurality of route candidates with a relatively high probability, wherein the router determiner comprises: a route quality checker for checking quality of each of

the route candidates by referring to the link state information stored in the link state memory when receiving a connection setup request; and a route candidate selector for selecting the route for a requested connection from the route candidates depending on the quality of each of the route candidates (column 7, lines 15-56; column 6, lines 21-26; column 14, line 51 – column 15, line 39), wherein the route candidate selector selects a route candidate having a shortest delay time as the route for a requested connection among the route candidates satisfying a requested quality (column 5, lines 21-27; column 6, lines 21-26).

As per claim 7, Bertin teaches a load distribution device provided in each of nodes in a network, comprising: a link state memory retrievably storing link state information of the network, wherein the link state memory is used to dynamically calculate an alternate route for failure recovery when a failure notification is received; a route candidate memory retrievably storing a plurality of route candidates for each of possible endpoint nodes; and a route determiner for determining a route for a normally set up connection, wherein a route having a relatively small load is selected from a plurality of route candidates with a relatively high probability, wherein the router determiner comprises: a route quality checker for checking quality of each of the route candidates by referring to the link slate information stored in the link state memory when receiving a connection setup request; and a route candidate selector for selecting the route for a requested connection from the route candidates depending on the quality of each of the route candidates (column 7, lines 15-56; column 6, lines 21-26; column 14, line 51 – column 15, line 39; column 16, line 46 – column 17, line 10), wherein the route candidate selector selects a route candidate having a smallest fluctuation in data arrival interval as the route for a requested

connection among the route candidates satisfying a requested quality (column 5, lines 21-27; column 6, lines 21-26).

As per claim 8, Bertin teaches a load distribution device provided in each of nodes in a network, comprising: a link state memory retrievably storing link state information of the network, wherein the link state memory is used to dynamically calculate an alternate route for failure recovery when a failure notification is received; a route candidate memory retrievably storing a plurality of route candidates for each of possible endpoint nodes; and a route determiner for determining a route for a normally set up connection, wherein a route having a relatively small load is selected from a plurality of route candidates with a relatively high probability, wherein the router determiner comprises: a route quality checker for checking quality of each of the route candidates by referring to the link state information stored in the link state memory when receiving a connection setup request; and a route candidate selector for selecting the route for a requested connection from the route candidates depending on the quality of each of the route candidates (column 7, lines 15-56; column 6, lines 21-26; column 14, line 51 – column 15, line 39), wherein the route candidate selector selects a route candidate as the route for a requested connection from the route candidates in a weighted round robin fashion using a reciprocal of delay time for each of the route candidates as a weight (column 7, lines 5-8, wherein, the path selector tries the path adjacent to the current path until a desirable path is found; column 16, line 25 – column 17, line 10).

As per claim 9, Bertin teaches a load distribution device provided in each of nodes in a network, comprising: a link state memory retrievably storing link state information of the network, wherein the link state memory is used to dynamically calculate an alternate route for

failure recovery when a failure notification is received; a route candidate memory retrievably storing a plurality of route candidates for each of possible endpoint nodes; and a route determiner for determining a route for a normally set up connection, wherein a route having a relatively small load is selected from a plurality of route candidates with a relatively high probability, wherein the router determiner comprises: a route quality checker for checking quality of each of the route candidates by referring to the link state information stored in the link slate memory when receiving a connection setup request; and a route candidate selector for selecting the route for a requested connection from the route candidates depending on the quality of each of the route candidates (column 7, lines 15-56; column 6, lines 21-26; column 14, line 51 – column 15, line 39), wherein the route candidate selector selects a route candidate as the route for a requested connection from the route candidates in a weighted round robin fashion using a reciprocal of fluctuation in data arrival interval for each of the route candidates as a weight (column 7, lines 5-8, wherein, the path selector tries the path adjacent to the current path until a desirable path is found; column 16, line 25 – column 17, line 10).

As per claim 10, Bertin teaches the load distribution device according to claim 3, further comprising: an on-demand route calculator for calculating a route satisfying a requested quality by referring to the link state memory when no route candidate is found in the route candidate selector (column 7, lines 46-50).

As per claim 11, Bertin teaches the load distribution device according to claim 3, further comprising: an alternate route determiner for determining an alternate route when a failure notification is received, wherein a route having a relatively small load is selected as the alternate

route from a plurality of route candidates with a relatively high probability (column 7, lines 15-56; column 27, line 55 – column 30, line 33).

As per claim 12, Bertin teaches the load distribution device according to claim 11, wherein the alternate route determiner comprises: an alternate route quality checker for checking quality of each of the route candidates by referring to the link state information stored in the link state memory when receiving a failure notification message; and an alternate route candidate selector for selecting the alternate route for failure recovery from the route candidates depending on the quality of each of the route candidates (column 7, lines 15-56; column 27, line 55 – column 30, line 33).

As per claim 13, Bertin teaches a load distribution device provided in each of nodes in a network, comprising: a link state memory retrievably storing link state information of the network, wherein the link state memory is used lo dynamically calculate an alternate route for failure recovery when a failure notification is received; 'a route candidate memory retrievably storing a plurality of route candidates for each of-possible endpoint nodes; and a route determiner for determining a route for a normally set up connection, wherein a route having a relatively small load is selected from a plurality of route candidates with a relatively high probability; and an alternate route determiner for determining an alternate route when a failure notification is received, wherein a route having a relatively small load is selected as the alternate route from a plurality of route candidates with a relatively high probability, wherein the alternate router determiner comprises: a route quality checker for checking quality of each of the route candidates by referring to the link stale information stored in the link state memory when receiving a connection setup request; a route candidate selector for selecting the route for a

requested connection from the route candidates depending on the quality of each of the route candidates (column 7, lines 15-56; column 6, lines 21-26; column 14, line 51 – column 15, line 39), wherein the route candidate selector selects a route candidate having a broadest available bandwidth as the alternate route for failure recovery (column 6, lines 21 –26; column 14, line 51 – column 15, line 39).

As per claim 14, Bertin teaches a load distribution device provided in each of nodes in a network, comprising: a link state memory retrievably storing link state information of the network, wherein the link state memory is used to dynamically calculate an alternate route for failure recovery when a failure notification is received; a route candidate memory retrievably storing a plurality of route candidates for each of possible endpoint nodes; and a route determiner for determining a route for a normally set up connection, wherein a route having a relatively small load is selected from a plurality of route candidates with a relatively high probability; and an alternate route determiner for determining an alternate route when a failure notification is received, wherein a route having a relatively small load is selected as the alternate route from a plurality of route candidates with a relatively high probability, wherein the alternate router determiner comprises: a route quality checker for checking quality of each of the route candidates by referring to the link state information stored in the link state memory when receiving a connection setup request; a route candidate selector for selecting the route for a requested connection from the route candidates depending on the quality of each of the route candidates, wherein the route candidate selector selects a route candidate as the alternate route for failure recovery from the route candidates in a round robin fashion (column 7, lines 15-56; column 6, lines 21-26; column 14, line 51 – column 15, line 39; column 27, line 53 – column 30,

line 33; column 7, lines 5-8, wherein, the path selector tries the path adjacent to the current path until a desirable path is found).

As per claim 15, Bertin teaches a load distribution device provided in each of nodes in a network, comprising: a link state memory retrievably storing link state information of the network, wherein the link state memory is used lo dynamically calculate an alternate route for failure recovery when a failure notification is received; a route candidate memory retrievably storing a plurality of route candidates for each of possible endpoint nodes; and a route determiner for determining a route for a normally set up connection, wherein a route having a relatively small load is selected from a plurality of route candidates with a relatively high probability; and an alternate route determiner for determining an alternate route when a failure notification is received, wherein a route having a relatively small load is selected as the alternate route from a plurality of route candidates with a relatively high probability, wherein the alternate router determiner comprises: a route quality checker for checking quality of each of the route candidates by referring to the link state information stored in the link state memory when receiving a connection setup request; a route candidate selector for selecting the route. for a requested connection from the route candidates depending on the quality of each of the route candidates (column 7, lines 15-56; column 6, lines 21-26; column 14, line 51 – column 15, line 39; column 27, line 53 – column 30, line 33), wherein the route candidate selector selects a route candidate as the alternate route for failure recovery from the route candidates in a weighted round robin fashion using an available bandwidth of each of the route candidates as a weight (column 14 line 51 – column 17, line 10).

As per claim 16, Bertin teaches a load distribution device provided in each of nodes in a network, comprising: a link state memory retrievably storing link state information of the network, wherein the link state memory is used to dynamically calculate an alternate route for failure recovery when a failure notification is received; a route candidate memory retrievably storing a plurality of route candidates for each of possible endpoint nodes; and a route determiner for determining a route for a normally set up connection, wherein a route having a relatively small load is selected from a plurality of route candidates with a relatively high probability; and an alternate route determiner for determining an alternate route when a failure notification is received, wherein a route having a relatively small load is selected as the alternate route from a plurality of route candidates with a relatively high probability, wherein the alternate router determiner comprises: a route quality checker for checking quality of each of the route candidates by referring to the link state information stored in the link state memory when receiving a connection setup request; a route candidate selector for selecting the route for a requested connection from the route candidates depending on the quality of each of the route candidates (column 7, lines 15-56; column 6, lines 21-26; column 14, line 51 – column 15, line 39; column 27, line 53 – column 30, line 33), wherein the route candidate selector selects a route candidate having a shortest delay time as the alternate route for failure recovery among the route candidates satisfying a required quality (column 5, lines 21-27; column 6, lines 21-26).

As per claim 17, Bertin teaches load distribution device provided in each of nodes in a network, comprising: a link stale memory retrievably storing link state information of the network, wherein the link state memory is used lo dynamically calculate an alternate route for failure recovery when a failure notification is received; a route candidate memory retrievably

storing a plurality of route candidates for each of possible endpoint nodes; and a route determiner for determining a route for a normally set up connection, wherein a route having a relatively small load is selected from a plurality of route candidates with a relatively high probability; and an alternate route determiner for determining an alternate route when a failure notification is received, wherein a route having a relatively small load is selected as the alternate route from a plurality of route candidates with a relatively high probability, wherein the alternate router determiner comprises: a route quality checker for checking quality of each of the route candidates by referring to the link slate information stored in the link state memory when receiving a connection setup request; a route candidate selector for selecting the route for a requested connection from the route candidates depending on the quality of each of the route candidates (column 7, lines 15-56; column 6, lines 21-26; column 14, line 51 – column 15, line 39; column 27, line 53 – column 30, line 33), wherein the route candidate selector selects a route candidate having a smallest fluctuation in data arrival interval as the alternate route for failure recovery among the route candidates satisfying a required quality (column 5, lines 21-27; column 6, lines 21-26).

As per claim 18, Bertin teaches load distribution device provided in each of nodes in a network, comprising: a link state memory retrievably storing link state information of the network, wherein the link state memory is used to dynamically calculate an alternate route for failure recovery when a failure notification is received; a route candidate memory retrievably storing a plurality of route candidates for each of possible endpoint nodes; and a route determiner for determining a route for a normally set up connection, wherein a route having a relatively small load is selected from a plurality of route candidates with a relatively high probability; and

an alternate route determiner for determining an alternate route when a failure notification is received, wherein a route having a relatively small load is selected as the alternate route from a plurality of route candidates with a relatively high probability, wherein the alternate router determiner comprises: a route quality checker for checking quality of each of the route candidates by referring to the link state information stored in the link state memory when receiving a connection setup request; a route candidate selector for selecting the route for a requested connection from the route candidates depending on the quality of each of the route candidates (column 7, lines 15-56; column 6, lines 21-26; column 14, line 51 – column 15, line 39; column 27, line 53 – column 30, line 33), wherein the route candidate selector selects a route candidate as the alternate route for failure recovery from the route candidates in a weighted round robin fashion using a reciprocal of delay time for each of the route candidates as a weight (column 7, lines 5-8, wherein, the path selector tries the path adjacent to the current path until a desirable path is found; column 16, line 25 – column 17, line 10).

As per claim 19, Bertin teaches load distribution device provided in each of nodes in a network, comprising: a link state memory retrievably storing link state information of the network, wherein the link state memory is used to dynamically calculate an alternate route for failure recovery when a failure notification is received; a route candidate memory retrievably storing a plurality of route candidates for each of possible endpoint nodes; and a route determiner for determining a route for a normally set up connection, wherein a route having a relatively small load is selected from a plurality of route candidates with a relatively high probability; and an alternate route determiner for determining an alternate route when a failure notification is received, wherein a route having a relatively small load is selected as the alternate route from a

plurality of route candidates with a relatively high probability, wherein the alternate router determiner comprises: a route quality checker for checking quality of each of the route candidates by referring to the link state information stored in the link state memory when receiving a connection setup request; a route candidate selector for selecting the route for a requested connection from the route candidates depending on the quality of each of the route candidates(column 7, lines 15-56; column 6, lines 21-26; column 14, line 51 – column 15, line 39; column 27, line 53 – column 30, line 33), wherein the route candidate selector selects a route candidate as the alternate route for failure recovery from the route candidates in a weighted round robin fashion using a reciprocal of fluctuation in data arrival interval for each of the route candidates as a weight (column 7, lines 5-8, wherein, the path selector tries the path adjacent to the current path until a desirable path is found; column 16, line 25 – column 17, line 10).

As per claim 20, Bertin teaches the load distribution device according to claim 13, further comprising: an on-demand route calculator for calculating an alternate route satisfying a required quality by referring to the link state memory when no route candidate is found in the route candidate selector (column 7, lines 15-56; column 27, line 55 – column 30, line 33).

As per claim 21, Bertin teaches a node in a network, comprising: a connection setup request receiver; a connection setup processor (column 7, lines 22-26; column 6, lies 21-26); a link state memory retrievably storing link state information of the network, wherein the link state database is used to dynamically calculate an alternate route for failure recovery when a failure notification is received (column 6, lines 56-58; column 7, lines 15-56); a route candidate memory retrievably storing a plurality of route candidates for each of possible endpoint nodes (column 7, lines 26-31); and a route determiner for determining a route for a normally set up connection to

set up the requested connection, wherein a route having a relatively small load is selected from a plurality of route candidates with a relatively high probability (column 6, lines 21-26), wherein the router determiner comprises: a route quality checker for checking quality of each of the route candidates by referring to the link state information stored in the link state memory when receiving a connection setup request; and a route candidate selector for selecting the route for a requested connection from the route candidates depending on the quality of each of the route candidates (column 7, lines 16-56), wherein the route candidate selector selects a route candidate as the route for a requested connection from the route candidates in at least one of : a) a round robin fashion, b) a broadest available bandwidth, c) a weighted round robin fashion using an available bandwidth of each of the route candidates as a weight, d) a shortest delay time, e) a smallest fluctuation in data arrival interval, f) a weighted round robin fashion using a reciprocal of delay time as a weight, and g) a weighted round robin fashion using a reciprocal of fluctuation in data arrival interval as a weight (column 6, lines 21-26; column 14, line 51 – column 15, line 39; column 7, lines 5-8; column 5, lines 21-27).

As per claim 23, Bertin teaches the node according to claim 21, further comprising: an alternate route determiner for determining an alternate route when a failure notification is received, wherein a route having a relatively small load is selected as the alternate route from a plurality of route candidates with a relatively high probability (column 7, lines 15-56; column 27, line 55 – column 30, line 33).

As per claim 24, Bertin claims the node the alternate route determiner comprises: according to claim 23, wherein an alternate route quality checker for checking quality of each of the route candidates by referring to the link state information stored in the Iink state memory

when receiving a failure notification message; and an alternate route candidate selector for selecting the alternate route for failure recovery from the route candidates depending on the quality of each of the route candidates (column 7, lines 15 –56; column 27, line 55 – column 30, line 33).

As per claim 25, Bertin teaches the node according to claim 21, further comprising: a link state memory controller for updating at least the link state memory when one of a link state message and a failure notification message is received (column 7, lines 15-56).

As per claim 26, Bertin teaches a load distribution method in each of nodes included in a network, comprising the steps of : a) retrievably storing link state information of the network, wherein the link stale database is used to dynamically calculate an alternate route for failure recovery when a failure notification is received (column 7, lines 15-56); b) retrievably storing a plurality of route candidates for each of possible endpoint nodes; and c) determining a route for a normally set up connection, wherein a route having a relatively small load is selected from a plurality of route candidates with a relatively high probability (column 6, lines 21-26), wherein the step (c) comprises the steps of : cl) checking quality of each of the route candidates by referring to the link slate information when receiving a connection setup request; and c2) selecting the route for a requested connection from the route candidates depending on the quality of each of the route candidates (column 7, lines 15-56; column 14, line 53 – column 15, line 21), wherein the step c2) selects a route candidate as the route for a requested connection from the route candidates in at least one of : a) a round robin fashion, b) a broadest available bandwidth, c) a weighted round robin fashion using an available bandwidth of each of the r-o-u-t-e candidates as a weight, d) a shortest delay lime, e) a smallest fluctuation in data arrival interval,

f) a weighted round robin fashion using a reciprocal of delay time as a weight, and g) a weighted round robin fashion using a reciprocal of fluctuation in data arrival interval as a weight (column 6, lines 21-26; column 14, line 51 – column 15, line 39; column 7, lines 5-8; column 5, lines 21-27).

As per claim 28, Bertin teaches the load distribution method according to claim 26, further comprising the step of: d) determining an alternate route when a failure notification is received, wherein a route having a relatively small load is selected as the alternate route from a plurality of route candidates with a relatively high probability (column 7, lines 15-56; column 27, line 55 – column 30, line 33).

As per claim 29, Bertin teaches the load distribution method according to claim 28, wherein the step (d) comprises the steps of: checking quality of each of the route candidates by referring lo the link state information when receiving a failure notification message; and selecting the alternate route for failure recovery from the route candidates depending on the quality of each of the route candidates (column 7, lines 15-56; column 27, line 55 – column 30, line 33).

As per claim 30, Bertin teaches a recording medium storing a computer program for performing a load distribution operation in each of nodes included in a network (column 7, lines 28-31, wherein, it is inherent that the database be in a memory device), the computer program comprising the steps of: a) retrievably storing link state information of the network, wherein the link slate database is used to dynamically calculate an alternate route for failure recovery when a failure notification is received; b) retrievably storing a plurality of route candidates for each of possible endpoint nodes; and c) determining a route for a normally set up connection, wherein a

route having a relatively small load is selected from a plurality of route candidates with a relatively high probability (column 7, lines 15-56; column 6, lines 21-26), wherein the step (c) comprises the steps of: cl) checking quality of each of the route candidates by referring to the link stale information when receiving a connection setup request; and c2) selecting the route for a requested connection from the route candidates depending on the quality of each of the route candidates (column 7, lines 15-56), wherein the step c2) selects a route candidate as the route for a requested connection from the route candidates in at least one of: a) a robin fashion, b) a broadest available bandwidth, c) a weighted round robin fashion using an available bandwidth of each of the route candidates as a weight, d) a shortest delay time, e) a smallest fluctuation in data arrival interval, f) a weighted round robin fashion using a reciprocal of delay time as a weight, and g) a weighted round robin fashion using a reciprocal of fluctuation in data arrival interval as a weight (column 6, lines 21-26; column 14, line 51 – column 15, line 39; column 7, lines 5-8; column 5, lines 21-27).

As per claim 32, Bertin teaches the recording medium according to claim 30, further comprising the step of: d) determining an alternate route when a failure notification is received, wherein a route having a relatively small load is selected as the alternate route from a plurality of route candidates with a relatively high probability (column 7, lines 15-56; column 27, line 55 – column 30, line 33).

As per claim 33, Bertin teaches the recording medium according to claim 32, wherein the step (d) comprises the steps of: checking quality of each of the route candidates by referring to the link state information when receiving a failure notification message; and selecting the

alternate route for failure recovery from the route candidates depending on the quality of each of the route candidates (column 27, line 55 – column 30, line 33).

As per claim 34, Bertin teaches a load distribution device provided in each of nodes in a network that also contains links connecting the nodes, comprising: a link state memory retrievably storing link state information of the network, wherein the link state memory is used lo dynamically calculate an alternate route for failure recovery when a failure notification is received; a route candidate memory retrievably storing a plurality of route candidates for each of possible endpoint nodes; and a route determiner for determining a route for a normally set up connection, wherein a route having a relatively small load is selected from a plurality of route candidates with a relatively high probability, wherein the router determiner comprises: a route quality checker for checking quality of each of the route candidates by referring to the link state information stored in the link state memory when receiving a connection setup request; a route candidate selector for selecting the route for a requested connection from the route candidates depending on the quality of each of the route candidates; and a route calculator for calculating the plurality of route candidates and for storing the plurality of route candidates in the route candidate memory (column 7, lines 15-56; column 6, lines 21-26; column 14, line 53 – column 15, line 21), wherein the route calculator determines at least two route candidates for each of the possible endpoint nodes such that the nodes and the links of the network that are assigned to the at least two route candidates are not shared among the at least two route candidates, to a greatest possible extent (column 6, lines-58, wherein, Bertin teaches "paths" implying that more than one path can be selected).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See attached PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher S. McCarthy whose telephone number is (703)305-7599. The examiner can normally be reached on M-F, 8 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on (703)305-9713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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